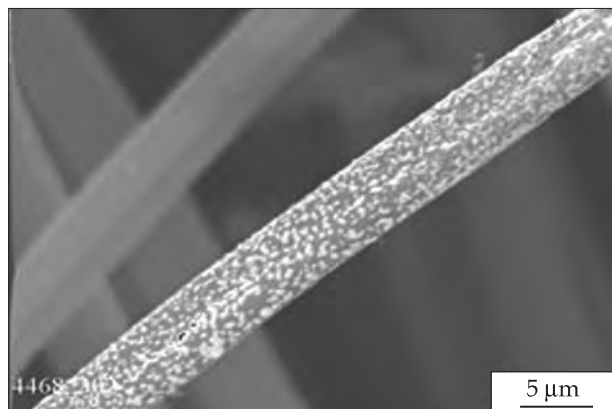


NANOSTRUCTURED CARBON FIBER ACTIVATED SORPTION MATERIALS FOR MEDICAL APPLICATION



Carbon fiber nanostructured material
of medical application



Immobilization of copper nanoparticles
on carbon fiber surface

Areas of Application

The material can be used in clinics as sorbent for treatment of toxic poisoning; as filter for cleaning of blood and lymph; as antibacterial agent for treatment of wounds, eczemas, and burns; as antiradionuclide agent; as target drug carrier

Advantages

As compared with the world analogs, the offering has 2–3 times higher sorption kinetics and sorption capacity with respect to low-, middle-, and high-molecular physiological active substances, which broadens the area of its application and enables selective sorption and targeted functional treatment of more than 40 diseases

IPR Protection

IPR2

Specification

Whole porous volume (benzol), cm ³ /g	0.8–1.3
Specific surface area, m ² /g	1500–2800
Adsorption of methylene blue, mg/g	450–800
Residual concentration at 60 min sorption, mg/ml	
creatinine (initial concentration – 4.5 mg/ml)	0.02
medinal (initial concentration – 6 mg/ml)	0.02
urea (initial concentration – 15 mg/ml)	0.013

Stage of Development.

Suggestions for Commercialization

IRL3, TRL4
Manufacture of small batches.
Seeking partners for industrial production

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